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RATIONAL TREATMENT OF DISPLACEMENTS OF THE UTERUS,

By A. V. Macan, M.B.

A View of Current Medical Literature.

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NEW YORK, August, 1882.

RATIONAL TREATMENT OF ANTERIOR AND POSTERIOR DISPLACEMENTS OF THE UTERUS.

BY A. V. MACAN, M.B.

I INTEND to confine my observations to one or two points, the elucidation of which seems to me to be absolutely necessary before there can be anything like a rational treatment of uterine displacements. We are first called on to determine what the normal position of the uterus is. For without settling what is normal, we have no standard by which to judge or determine what is abnormal. What are, then, the views most generally held as to the normal position of the uterus? Thomas says the normal position of the uterus "is one of slight anteversion, the axis of the body corresponding with that of the superior strait, which is a line running from the umbilicus, or a little above it, to the coccyx. . . . The degree of this forward inclination may be so increased by slight causes as to constitute a morbid state;" and he further looks on all flexions as pathological. Dr. Barnes says: "Assuming, however, as we may, that the uterus is suspended in the upper part of the pelvic cavity, so that its fundus is on a level with the plane of the pelvic brim, that its inclination coincides nearly with the axis of the pelvic inlet, and that it floats between bladder and rectum about midway be-

tween the symphysis pubis and the sacrum, but somewhat nearer to the symphisis, we shall have a standard position sufficiently defined for clinical purposes." A slight degree of anteflexion must, he thinks, be considered normal, but he is disposed to infer "that anteflexion rarely fails to entail trouble." Graily Hewitt holds that normally the uterine canal "passes at first upwards in the direction of the pelvic axis, but higher up there is a slight inclination forwards; and Dr. Meadows believes that the uterine canal is "straight through its course, its axis being identical with that of the pelvic brim or inlet." They all allow that the uterus has a certain degree of mobility, and some think a slight degree of anteflexion is normal; but they agree that if, in making a vaginal examination, the fundus can plainly be felt in the anterior *cul-de-sac*, this constitutes pathological anteflexion or version. But, for all practical purposes, we may take the diagram, (Fig. 1), from Graily Hewitt's work on "Diseases of Women," as representing the ordinarily received opinion as to the normal position of the uterus—viz., that the canal of the cervix and the cavity of the uterus form very nearly a straight line, and that the position of the axis of the uterus coincides nearly with a line drawn fram the sacrovertebral angle to the anus; the uterus itself being thus placed very nearly perpendicularly in the pelvis—the exact amount of normal mobility of the fundus being estimated at 1½ inches.

Such was the position of affairs when Schultze first put forward his views as to the normal position of the uterus, and as to the proper treatment of anterior and posterior displacements. He holds that the normal position of the uterus, when the bladder is empty, is one of anteflexion—the anterior wall of the uterus being nearly parallel to the anterior vaginal wall. The fundus lies supported on the empty bladder, while the cervix is suspended from the second bone of the sacrum by the folds of Douglas, whlch contain some unstriped muscular fibres, named by Luschka the musculi retractores uteri. As the bladder becomes filled, it gradually lifts the fundus upwards and backwards; and as it is emptied, the fundus follows it downwards and forwards—this being, in the upright position, in part due to the action of gravity, but chiefly to the intra-abdominal pressure, acting on the posterior surface of the uterus. Normally, therefore, the uterus is in a constant state of motion, the fundus rising and falling with the varying amount of urine in the bladder. Professor Schultze has measured the angle through which the fundus moves during the emptying of a full bladder, and found it 48°. We cannot, therefore, speak of any one position of the uterus as the normal one. Indeed when the uterus, from any cause, becomes fixed and unable to follow the changing shape of bladder, this is a pathological condition. The most frequent cause for pathological anteflexion is, according to Schultze, a shortening of Douglas's folds from inflammation, by which the cervix is drawn upwards towards the second bone of the sacrum. This inflammation of Douglas's folds is called by him parametritis posterior.

These views, which at first met with great opposition, have gradually been adopted by most modern gynæcologists. Thus Fritsch takes them with some slight modification as the basis of his work on "Uterine Displacements." He thinks that the normal position of the uterus, when the bladder is empty, is one of well-marked anteflexion, the cervix making with the body an angle of nearly 90°, and that the healthy uterus can be fixed backwards and forwards with the greatest ease—rigidity being pathological and due to chronic metritis. Fig. 2 is copied from his book, and shows this position very clearly. As the bladder becomes filled the angle of flexion gradually decreases, and the anterior wall of the vagina lengthens. As the bladder is emptied the fundus descends again till it comes nearly to rest on the symphysis pubis. He also lays great stress on the change in the position of the uterus according to the position in which we examine the woman. He does not think, however, that the uterus is so much suspended from the second bone of the sacrum by the

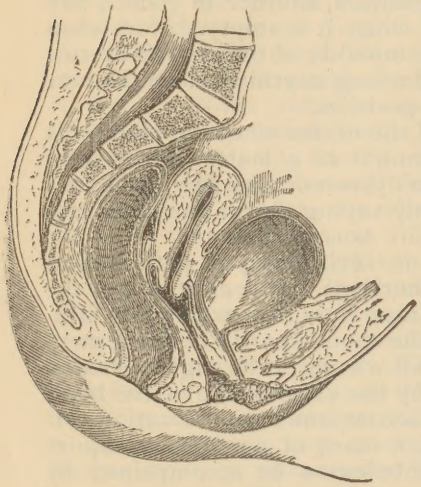

Fig. 1. Normal Position of the Uterus (Graily Hewitt).

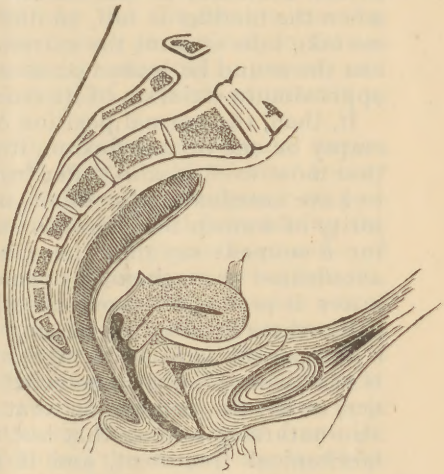

Fig. 2. Normal Position of the Uterus (Fritsch).

folds of Douglas as supported from below by the muscular tube of the vagina and by the floor of the pelvis. If any of the ligaments become shortened or rigid, this makes the position of the uterus a fixed one, and is pathological. Thus it is equally pathological whether the uterus be prolapsed, or retroflexed, or so fixed that it is unable to perform its proper physiological changes of position. If the angle of flexion be less than a right angle, or if neither the distension of the bladder nor the congestion that accompanies menstruation be able to lessen the amount of flexion, then the condition is a pathological one. Thus acute anteflexion is undoubtedly a pathological condition, but it need not necessarily be accompanied by symptoms, any more than crooked legs, which are also pathological, need give rise to symptoms. He agrees with Schultze that this pathological anteflexion is fre-

quently due to shortening of Douglas's folds, but does not think that this shortening is often due to parametritis, but is either congenital or due to inflammation of the peritoneum or perimetritis, and not to inflammation of the cellular tissue or parametritis.

Now, the accuracy of this statement, that the normal position of the uterus when the bladder is empty is one of anteflexion at an angle of nearly 90°, can be readily verified by anyone ; but the examination must be made bimanually, patient in the dorsal position, and the bladder previously emptied. When the bladder is full it presses the fundus upwards and backwards, and makes it impossible to get it between the two hands ; and even when there is only a small quantity of urine in the bladder pressure over it will cause the patient to contract the abdominal muscles, and thus equally prevent us feeling the fundus. It must also be obvious that there can be no possible chance of unanimity as to the normal position of the uterus in any individual case if one person examines in the dorsal position, another in Sims' ; one when the bladder is full, another when it is empty. Nor, when we take into account the extreme mobility of the normal uterus, can the sound be looked on as affording anything more than an approximate estimate of its true position.

If, then, the normal position of the uterus when the bladder is empty be one of anteflexion, it cannot be a matter for wonder that most women who suffer from dysmenorrhœa are also found to have anteflexion, for this is only saying that in the large majority of women the uterus is in its normal position. I do not for a moment say that there is no such thing as pathological anteflexion or mechanical dysmenorrhœa. The existence of the latter is proved by those cases, rare it is true, where the dysmenorrhœa is cured by passing the sound shortly before a menstrual period ; and the former exists whenever the angle of flexion is less than 90°, or is unaffected by the varying size of the bladder, or by the congestion that accompanies menstruation. It also naturally follows that but few cases of anteflexion require mechanical treatment, and if anteflexion be accompained by symptoms, such as dysmenorrhœa and sterility, these are generally due to the complications present; and not to the mere displacement.

Furthermore, it is acknowledged at the present day by most gynæcologists that no mere vaginal pessary, such as Thomas's or Graily Hewitt's, has any power to cure an anteflexion, whatever effect it may have on an anteversion. If, therefore, we come to the conclusion that an anteflexion requires mechanical treatment, we must have recourse either to dilatation or the use of a stem pessary. In the large majority of cases, however, the symptoms will disappear if the complications are cured, even though the uterus remains acutely anteflexed. Indeed, if the pressure of the anteflexed fundus on the neck of the bladder be the cause of vesical itritation, we have not mended matters much by substituting the pressure of a Thomas's or Graily Hewitt's pessary for that of the fundus.

So much for anterior displacements. Retroflexion and retroversion need not delay us so long; for I take it there is no question as to their both being pathological conditions which require prompt mechanical treatment. Their diagnosis by the bimanual method, or by the sound, is generally free from difficulty, but the diagnosis of the mere displacement is of little value, as to prognosis and treatment, compared to a thorough appreciation of all the complications that are present.

Now this can most readily be obtained by the bimanual method of examination, which, for this reason alone, should always be preferred to the sound. But its advantages will be even more apparent when we come to consider treatment. This very generally consists in the introduction of a Hodge's so-called "lever" pessary. I think this term "lever pessary" has contributed more than anything else to confuse the whole subject of the treatment of posterior uterine displacements. For the idea which the term is meant to convey, and does convey, is that the anterior arm of the pessary moves upwards and downwards with the motion imparted to the anterior vaginal wall by the diaphragm, causing the whole instrument to rotate, as it were, on a pivot, so that as the anterior arm descends, the posterior one moves upwards and forwards into the posterior *cul-de-sac*, and so tends constantly to replace the retroflexed fundus.

At the present day hardly any one claims any "lever" action for Hodge's pessary, but still the evil effects of the "lever" theory can be traced through the whole mechanical treatment of posterior uterine displacement. Thus the mode of introducing the pessary corresponded to this theory. If the uterus be retroflexed a sound is passed into the fundus with the concavity backwards. The sound is then turned round so as to raise the fundus out of Douglas's space, and the pessary is introduced either over the sound or after its removal. The posterior arm of the pessary is therefore supposed to press the fundus upwards and forwards and thus restore the uterus to its normal position, and then keep it there. This is well illustrated by Fig. 3, copied from Dr. Barnes' book on "Diseases of Women," the dotted line in which shows also the supposed lever action of the pessary.

The uterus is here supposed to be in its normal position, and the fundus is represented as resting on, and being kept in its position by, the posterior arm of the Hodge's pessary. It is obvious to everyone that the intra-abdominal pressure must here strike on the anterior surface of the fundus, and thus tend constantly to force the latter downwards and backwards against the pessary. Under these conditions one of three things is almost certain to happen—1st, Either the fundus presses so hard on the posterior arm of the pessary as to drive the whole instrument out of the vagina; or, 2nd, the fundus slips off to one side of the round posterior arm of the pessary, and in so doing pushes this portion into the opposite side of the pelvis, thus rotating the instrument on its long axis; or, 3rd, if the instrument retains its place, and is neither driven downwards out of the vagina, nor caused to rotate on its long axis within the pelvis, it causes so

much pain that the patient cannot wear it.

Various forms of pessaries have, therefore, been invented to prevent each of these accidents, such as Graily Hewitt's, which has a projection at its lower end which protrudes between the vulvæ, and thus prevents rotation of the pessary on its long axis; or Gervis', in which the upper portion is broad and concave upwards, so as to receive the fundus, and prevent it falling off sideways: or Thomas's, the upper part of which is also broad, thick, and concave, with the same object, and also in order, by increasing the surface of support, to prevent the instrument causing pain by pressing against the tender fundus, while its lower branch is pointed, so that it may resist the tendency to rotation. Greenhalgh's pessary is constructed with an elastic cushion at its upper end, to prevent any pain or pressure against the fundus. Various other spring pessaries have been invented with the same objects; indeed so much are these supposed de-

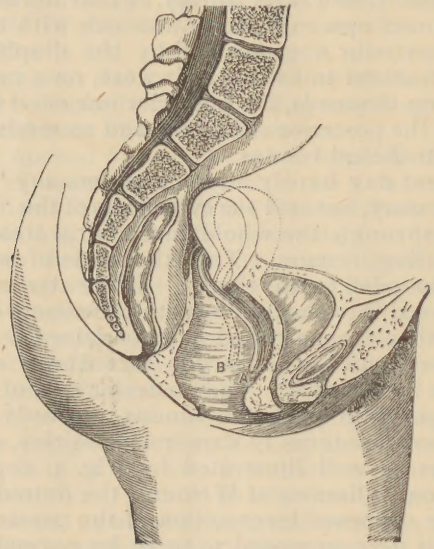

Fig. 3. Hodge's Pessary *in situ*. "Lever" action (Barnes).

fects of Hodge's pessary felt, that almost every gynæcologist has introduced a special modification of his own.

Now if we compare Fig. 3 with the one representing the normal position of the uterus according to Fritsch Fig. 2, two obvious faults are at once apparent in this method of treatment—first, the uterus has never been replaced at all; and, second, the pessary is supposed to keep the uterus in its place by direct pressure on the fundus. Here again it is Schultze to whom we are indebted for having exposed these faults, and, at the same time, demonstrate the true principle on which posterior displacements of the uterus should be treated. This, shortly expressed, consists in first replacing the uterus in a position of exaggerated anteversion, and then fixing *the cervix* posteriorly by means of a

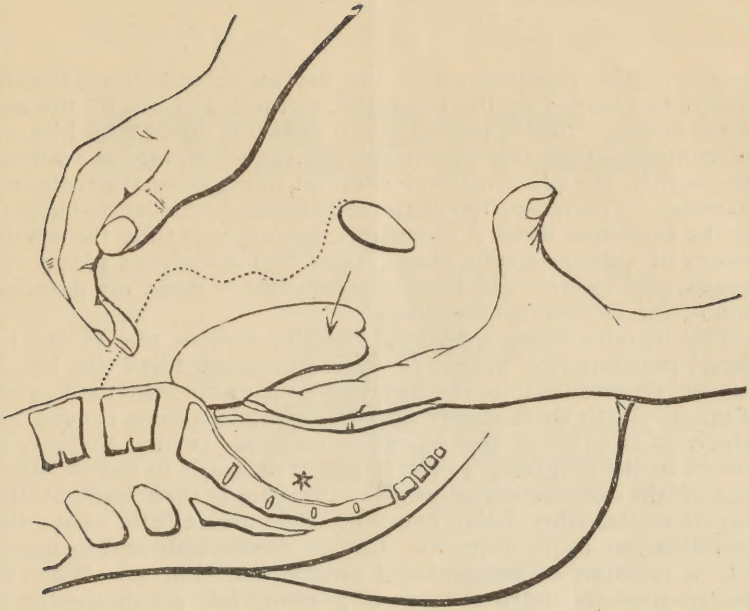

Fig. 4. Bimanual Reposition of the Uterus. First movement (Schultze).

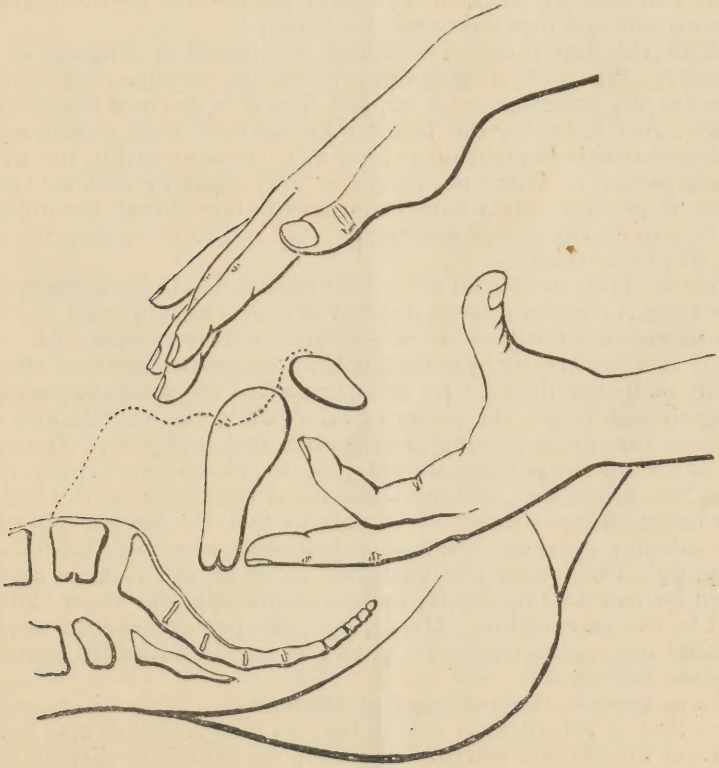

Fig. 5. Bimanual Reposition of the Uterus. Second movement (Schultze).

pessary. The replacement of the uterus, he maintains, should always be effected by the bimanual method, and not by the use of the sound. In this point Fritsch does not agree with him, as he contends that the essential point is to replace the uterus thoroughly, the exact method adopted being comparatively immaterial. The reposition of the retroflexed or retroverted uterus by the bimanual method illustrates, however, so fully the whole theory of this treatment, that I have had Schultze's plates enlarged, and by their aid I hope to be able to make my description of the method intelligible.

The bladder being emptied, and the woman placed in the dorsal position, two fingers of the right or left hand (the left is the one represented in the figure) are inserted into the vagina (Fig. 4). With them steady pressure is made against the fundus which is situated in the posterior *cul-de-sac* (where the star is placed in the diagram), so as to raise it upwards to one or other side of the sacrovertebral angle. Pressure is then made by the fingers of the other hand over the abdomen, a little above the umbilicus, so as to force the fundus downwards and forwards into a position of exaggerated anteversion (Fig. 5.) When in this position the intra-abdominal pressure falls on the posterior surface of the fundus, and presses it against the symphysis pubis. If we can now, by means of a pessary, prevent the cervix sinking downwards and forwards, the case is cured.

With this latter object Schultze has invented a figure of 8 pessary. When the instrument is *in situ* the smaller ring of the 8 lies in the posterior *cul-de-sac*, and into it is inserted the cervix uteri. Any tendency the latter may have to pass downwards and forwards is impossible as long as it remains within the ring of the pessary. When the cervix is very short he uses another form of pessary, but whatever pessary is introduced the object of it is to fix the cervix posteriorly, and not to press directly on the displaced fundus.

Are we, then, to discard altogether the use of Hodge's pessary? Far from it; for in a large number of cases, having once placed the uterus in a position of exaggerated anteversion, we can fix the cervix posteriorly by means of Hodge's pessary quite as effectually as by Schultze's. In order to do this we must choose one long enough to put the posterior *cul-de-sac* on the stretch, and to prevent the cervix passing downwards and forwards. The anterior end of the pessary should just be able to move freely behind the pubes, and, making a bimanual examination, the bladder being empty, we should be able to feel the fundus lying in the anterior *cul-de-sac*, the top of it almost touching the pubes (Fig. 5.) The longer the posterior *cul de-sac* the further backward we can fix the cervix, and consequently the more stable will be the anteversion. Hence, also, the pessary should never distend the vagina transversely, as this would naturally tend to shorten the vagina.

As to version, the treatment of retroversion differs in no way from that of retroflexion, except that we will probably also have to treat the chronic metritis on which the non-flexibility of the uterus chiefly depends.—*Dublin Journal Medical Science*, July.

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